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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,937	12/12/2001	Yongcai Wang	83824HEC	1660

7590

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EXAMINER

SCHWARTZ, PAMELA R

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/017,937

Applicant(s)

WANG ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-9 and 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitamura et al. (EP 903,246).

Kitamura et al. disclose an ink jet recording material comprising one or more ink receiving layers on a support for use in an ink jet recording method (p. 3, lines 43-50). It is noted that the method steps (excluding the particulars of the recording medium) disclosed by applicants are conventional and would inherently be met by any ink jet recording method used by the prior art.

The ink receiving layers include colloidal pigment particles that may be of colloidal silica and have an average particles size of 10 to 300 nm and an ultraviolet ray absorber. The UV absorber is present in an amount of .25 to 25 parts by weight per 100 parts of the total amount of pigment (p. 5, lines 22-24). The ink receiving layer(s) may also contain an antioxidant which is present in an amount of 1 to 10,000 parts by weight by 100 parts UV absorber (see p. 5. lines 53-57). The antioxidants may be phenolic or sulfur containing, among others (see p. 6, lines 3-44). Antioxidants may be used as a water insoluble powder or as an emulsion, have an average particle size of 500 nm or less, and are used in an amount from 0.5 to 25 parts by weight per 100 parts by weight of the pigment. These materials are mixed with binder and other additives

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(see p. 6, line 45 to Page 7, lines 23). The binder may be a water-soluble polymer or a latex polymer. Binder is present in an amount of preferably 5 to 100 parts by solid weight to 100 parts by weight of the pigment. Using the ratios set forth above, pigment, binder and antioxidant may be present in the amounts set forth by the instant claims.

Additionally, the reference discloses that dispersants may be present. It would have been obvious to use known additives such as a dispersant in quantity necessary to properly disperse the materials. The examiner has studied the specification and notes that applicants appear to combine a dispersant with binder to form particles with the antioxidant prior to combining with more binder and inorganic pigment. However, there is no evidence that this results in an article that is structurally distinct from an article formed from a single emulsion of antioxidant, dispersant, binder and inorganic particles. Consequently, for purposes of an article claim or a method of use claim including the final ink jet recording medium, these two methods of formation for the recording medium will be treated as equivalent.

The prior art discloses use of either one ink receiving layer or two such layers (see page 7, line 56 to page 8, line 6. It appears that that the layers may be the same or different in composition since the additional layer that is not exposed is not required to have UV absorber present. The outermost layer is present in an amount of 1 to 30 g/m<sup>2</sup> which should permit stabilizer to be present in the range recited by claim 13.

Based upon this prior art disclosure as set forth above, it is believed that the instantly claimed invention is inherently disclosed by the reference. However, in the event that all required limitations are not set forth, it would have been obvious to one of

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ordinary skill in the art to make an ink jet recording medium including an antioxidant and other components within the instantly claimed ratios, and to use the medium in a conventional ink jet recording process based upon the teachings of the reference and the reasoning set forth above.

2. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al. (EP 903246) as applied to claim 1 above, and further in view of Chu et al. (6,440,537).

Chu et al. teach an ink jet recording medium including core/shell latex particles as instantly claimed. While Chu et al. do not refer to the latex particles as a binder, since a binder is normally required but is only an optional ingredient in the recording layer of Chu et al., it would have been obvious to one of ordinary skill in the art that the core/shell latex of Chu et al. may be used to serve the function of binder for the layer. This is especially true due to the glass transition temperature of the shell materials of Chu et al. (see col. 3, lines 23-49 and col. 4, lines 41-52). Chu et al. disclose use of the core/shell latex diminishes cracking which would have been an important characteristic in the glossy medium of the primary reference. Consequently, it would have been obvious to one of ordinary skill in the art to utilize core/shell latex as some or all of the binder of the primary reference in order to diminish surface cracks and improve gloss.

3. Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al. (EP 903246) as applied to claim 1 above, and further in view of Becker (US 2002/0071019).

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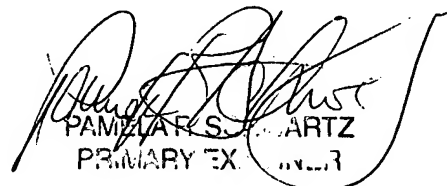
Becker discloses a recording medium which he wishes to treat with a finishing step in order to embed the image in the medium and to attain a desired degree of gloss (see [0011]). Becker teaches use of a cast-coating method or a method using a calendar roll as alternative finishing steps ([0035]). He also appears to use the term cast-coating process as generic to or overlapping with calendaring methods ([0035] and [0045]).

Kitamura et al. disclose a casting method in order to achieve a high degree of gloss. Based upon the teachings of the secondary art that casting and calendaring methods are known to be alternative methods of obtaining a high gloss finish, it would have been obvious to one of ordinary skill in this art to calendar rather than cast coat as an equivalent alternate means of obtaining a glossy surface.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela R. Schwartz whose telephone number is 703-308-2424. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on (703) 308-0449. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PRSchwartz  
June 15, 2003



PAMELA R. SCHWARTZ  
PRIMARY EX.